CLAIMS

1. A carbinol-functional silicone resin comprising the units:

 $(R^1_3SiO_{1/2})_a$ (i)

 $(R^2_2SiO_{2/2})_b$ (ii)

 $(R^3SiO_3/2)_c$ (iii) and

 $(SiO_4/2)_d$ (iv)

wherein R^1 and R^2 are each independently a hydrogen atom, an alkyl group having from 1 to 8 carbon atoms, an aryl group, a carbinol group free of aryl groups having at least 3 carbon atoms, or an aryl-containing carbinol group having at least 6 carbon atoms, R^3 is an alkyl group having from 1 to 8 carbon atoms or an aryl group, a has a value of less than or equal to 0.6, b has a value of zero or greater than zero, c has a value of greater than zero, d has a value of less than 0.5, and the value of a + b + c + d = 1, with the proviso that when each R^2 is methyl the value of b is less than 0.3 and with the proviso there is on average at least one carbinol group per resin molecule.

- 2. A carbinol-functional silicone resin of claim 1 wherein
- the alkyl group is methyl;

the aryl group is phenyl;

the carbinol group free of aryl groups having at least 3 carbon atoms is selected from a group having the formula R⁴OH wherein R⁴ is selected from

- (1) a group having the formula -(CH_2)_X- where x has a value of 3 to 10,
- (2) -CH₂CH(CH₃)-,
- (3) -CH₂CH(CH₃)CH₂-,
- (4) -CH2CH2CH(CH2CH3)CH2CH2CH2-, and
- (5) a group having the formula $-OCH(CH_3)(CH_2)_X$ wherein x has a value of 1 to 10 and a group having the formula $R^6(OH)$ wherein R^6 is a group having the formula $CH_2CH_2(CH_2)_XOCH_2CH$ wherein x in each case has a value of 1 to 10;

the aryl-containing carbinol group having at least 6 carbon atoms is a group having the formula R⁵OH wherein R⁵ is selected from

- (1) a group having the formula -(CH₂)_xC₆H₄- wherein x has a value of 0 to 10,
- (2) a group having the formula -CH₂CH(CH₃)(CH₂)_xC₆H₄- wherein x has a value of 0 to 10, and
- (3) a group having the formula -(CH₂)_xC₆H₄(CH₂)_x- wherein x has a value of 1 to 10.
- 3. A carbinol-functional silicone resin comprising the units:

 $(R^1_3SiO_{1/2})_a$ (i)

 $(R^2_2SiO_{2/2})_b$ (ii)

 $(R^3SiO_{3/2})_c$ (iii) and

 $(SiO_{4/2})_d$ (iv)

wherein R^1 is independently a hydrogen atom, an alkyl group having from 1 to 8 carbon atoms, an aryl group, a carbinol group free of aryl groups having at least 6 carbon atoms, or an aryl-containing carbinol group having at least 6 carbon atoms, R^2 is a hydrogen atom, an alkyl group having from 1 to 8 carbon atoms, an aryl group, a carbinol group free of aryl groups having at least 3 carbon atoms, or an aryl-containing carbinol group having at least 6 carbon atoms, R^3 is an alkyl group having from 1 to 8 carbon atoms or an aryl group, a has a value of less than or equal to 0.6, b has a value of zero or greater than zero, c has a value of greater than zero, d has a value of less than 0.5, and the value of a + b + c + d = 1, and with the proviso that when each R^2 is methyl the value of b is less than 0.3 and with the proviso that greater than 25 wt% of the $R^1+R^2+R^3$ groups in the carbinol-functional silicone resin are phenyl.

4. The carbinol-functional silicone resin of any of Claims 1 to 3 where a has a typical value of 0.1 to 0.6, b has a typical value of 0 to 0.4, c has a typical value of 0.3 to 0.8, and d has a typical value of 0 to 0.3.

5. The carbinol-functional silicone resin according to Claim 1 or 2 wherein the carbinol-functional silicone resin is selected from carbinol-functional silicone resins comprising the units:

 $((CH_3)_3SiO_{1/2})_a$

 $((R^2)CH_3SiO_{2/2})_b$ where $R^2 = -(CH_2)_3C_6H_4OH$

 $((C_6H_5)CH_3SiO_2/2)_b$ and

 $(C_6H_5SiO_3/2)_c$

carbinol-functional silicone resins comprising the units:

 $((R^1)(CH_3)_2SiO_{1/2})_a$ where $R^1 = -(CH_2)_3C_6H_4OH$ and

 $(C_6H_5SiO_{3/2})_c$,

carbinol-functional silicone resins comprising the units:

 $((R^1)(CH_3)_2SiO_{1/2})_a$ where $R^1 = -(CH_2)_3C_6H_4OH$ and

(CH₃SiO_{3/2})_c,

carbinol-functional silicone resins comprising the units:

 $((R^1)(CH_3)_2SiO_{1/2})_a$ where $R^1 = -(CH_2)_3OH$ and

(C₆H₅SiO_{3/2})_c,

carbinol-functional silicone resins comprising the units:

 $((R^1)(CH_3)_2SiO_{1/2})_a$ where $R^1 = -(CH_2)_3OH$

(CH₃SiO_{3/2})_c and

 $(C_6H_5SiO_{3/2})_c$,

carbinol-functional silicone resins comprising the units:

 $((CH_3)_3SiO_{1/2})_a$

 $((R^2)CH_3SiO_{2/2})_b$ where $R^2 = -(CH_2)_3OH$

 $((C_6H_5)CH_3SiO_{2/2})_b$ and

 $(C_6H_5SiO_{3/2})_c$

carbinol-functional silicone resins comprising the units:

 $((CH_3)_3SiO_{1/2})_a$

 $((R^{\hat{1}})(CH_3)_2SiO_{1/2})_a$ where $R^{\hat{1}} = -(CH_2)_3OH$ and

 $(C_6H_5SiO_3/2)_c$

carbinol-functional silicone resins comprising the units:

$$((R^1)(CH_3)_2SiO_{1/2})_a$$
 where $R^1 = -CH_2CH(CH_3)CH_2OH$

 $((H)(CH_3)_2SiO_{1/2})_a$ and

(C6H5SiO3/2)c,

carbinol-functional silicone resins comprising the units:

$$((R^1)(CH_3)_2SiO_{1/2})_a$$
 where $R^1 = -(CH_2)_3OH$

(CH₃SiO_{3/2})_c

wherein a has a typical value of 0.1 to 0.6, b has a typical value of zero to 0.4, and c has a typical value of 0.3 to 0.8.

- 5. The carbinol-functional silicone resin according to any of Claims 1, 2 or 4, wherein greater than 10 weight percent of the $R^{1}+R^{2}+R^{3}$ groups are phenyl.
- 6. A method of preparing carbinol-functional silicone resins comprising reacting:
 (A') at least one hydrogen-functional silicone resin comprising the units:

$$(R^{7}_{3}SiO_{1/2})_{a}(i)$$

$$(R^8 2 SiO_2/2)_b$$
 (ii)

$$(R^3SiO_{3/2})_c$$
 (iii) and

$$(SiO_{4/2})_d$$
 (iv)

wherein R^7 and R^8 are each independently an alkyl group having from 1 to 8 carbon atoms, an aryl group, or a hydrogen atom, R^3 is an alkyl group having from 1 to 8 carbon atoms or an aryl group, a has a value of less than or equal to 0.6, b has a value of zero or greater than zero, c has a value of greater than zero, d has a value of less than 0.5, the value of a + b + c + d = 1, with the proviso that when each R^8 is methyl the value of b is less than 0.3, with the proviso that there are at least two silicon-bonded hydrogen atoms present in the silicone resin; and (B') at least one vinyl-terminated alcohol; in the presence of (C') a hydrosilylation catalyst; and optionally (D') at least one solvent.

7. A method of preparing carbinol-functional silicone resins comprising reacting:
(A') at least one hydrogen-functional silicone resin comprising the units:

$$(R^{7}_{3}SiO_{1/2})_{a}$$
 (i)

 $(R^8 2 SiO_2/2)_h$ (ii)

 $(R^3SiO_3/2)_c$ (iii) and

 $(SiO_4/2)_d$ (iv)

wherein R^7 and R^8 are each independently an alkyl group having from 1 to 8 carbon atoms, an aryl group, or a hydrogen atom, R^3 is an alkyl group having from 1 to 8 carbon atoms or an aryl group, a has a value of less than or equal to 0.6, b has a value of zero or greater than zero, c has a value of greater than zero, d has a value of less than 0.5, the value of a + b + c + d = 1, with the proviso that when each R^8 is methyl the value of b is less than 0.3, with the proviso that there are at least two silicon-bonded hydrogen atoms present in the silicone resin and with the proviso that greater than 30 wt% of the $R^1+R^2+R^3$ groups phenyl; and (B') at least one vinyl-terminated alcohol; in the presence of (C') a hydrosilylation catalyst; and optionally (D') at least one solvent.

- 8. The method of preparing carbinol-functional silicone resins according to Claim 6 or 7 where a has a typical value of 0.1 to 0.6, b has a typical value of 0 to 0.4, c has a typical value of 0.3 to 0.8, and d has a typical value of 0 to 0.3.
- 9. The method of preparing carbinol-functional silicone resins according to Claim 6 where the hydrogen-functional silicone resins of (A) are selected from hydrogen-functional silicone resins comprising the units:

 $((CH_3)_3SiO_{1/2})_a$

 $((H)CH_3SiO_{2/2})_b$

 $((C_6H_5)CH_3SiO_{2/2})_b$ and

(C₆H₅SiO_{3/2})_c,

hydrogen-functional silicone resins comprising the units:

 $((H)(CH_3)_2SiO_{1/2})_a$

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(C_6H_5SiO_{3/2})_c,
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hydrogen-functional silicone resins comprising the units:

 $((H)(CH_3)_2SiO_{1/2})_a$

 $(CH_3SiO_{3/2})_c$

hydrogen-functional silicone resins comprising the units:

 $((H)(CH_3)_2SiO_{1/2})_a$

(CH₃SiO_{3/2})_c and

 $(C_6H_5SiO_{3/2})_c$,

and

hydrogen-functional silicone resins comprising the units:

 $((CH_3)_3SiO_{1/2})_a$

 $((H)(CH_3)_2SiO_{1/2})_a$

(C₆H₅SiO_{3/2})_c

wherein a has a typical value of 0.1 to 0.6, b has a typical value of 0 to 0.4, and c has a typical value of 0.3 to 0.8.

10. An emulsion composition comprising: (A) a carbinol-functional silicone resin comprising the units:

 $(R^{1}_{3}SiO_{1/2})_{a}$ (i)

 $(R^2_2SiO_2/2)_b$ (ii)

 $(R^3SiO_3/2)_c$ (iii) and

 $(SiO_4/2)_d$ (iv)

wherein R^1 and R^2 are each independently a hydrogen atom, an alkyl group having from 1 to 8 carbon atoms, an aryl group, a carbinol group free of aryl groups having at least 3 carbon atoms, or an aryl-containing carbinol group having at least 6 carbon atoms, R^3 is an alkyl group having from 1 to 8 carbon atoms or an aryl group, a has a value of less than or equal to 0.6, b has a value of zero or greater than zero, c has a value of greater than zero, d has a value of less than 0.5, and the value of a + b + c + d = 1, and with the proviso that when each R^2 is

methyl the value of b is less than 0.3, and with the proviso there is on average at least one carbinol group per resin molecule; (B) at least one surfactant; and (C) water.

- 11. The emulsion composition according to claim 10 wherein the alkyl group is methyl; the aryl group is phenyl; the carbinol group free of aryl groups having at least 3 carbon atoms is selected from a group having the formula R⁴OH wherein R⁴ is selected from
 - (1) a group having the formula - $(CH_2)_x$ where x has a value of 3 to 10,
 - (2) -CH₂CH(CH₃)-,
 - (3) -CH₂CH(CH₃)CH₂-,
 - (4) -CH2CH2CH(CH2CH3)CH2CH2CH2-, and
- (5) a group having the formula -OCH(CH₃)(CH₂)_x- wherein x has a value of 1 to 10 and a group having the formula R⁶(OH) wherein R⁶ is a group having the formula CH₂CH₂(CH₂)_xOCH₂CH- wherein x in each case has a value of 1 to 10; the aryl-containing carbinol group having at least 6 carbon atoms is a group having the formula R⁵OH wherein R⁵ is selected from
 - (4) a group having the formula -(CH₂)_xC₆H₄- wherein x has a value of 0 to 10,
 - (5) a group having the formula -CH₂CH(CH₃)(CH₂)_xC₆H₄- wherein x has a value of 0 to 10, and
 - a group having the formula $-(CH_2)_x C_6H_4(CH_2)_x$ wherein x has a value of 1 to 10.
- 12. The emulsion composition according to Claim 10 or 11 wherein where a has a typical value of 0.1 to 0.6, b has a typical value of 0 to 0.4, c has a typical value of 0.3 to 0.8, and d has a typical value of 0 to 0.3.
- 13. The emulsion composition according to Claim 10 or 11 wherein the carbinol-functional silicone resin is selected from carbinol-functional silicone resins comprising the units: ((CH₃)₃SiO_{1/2})_a

$$((R^2)CH_3SiO_{2/2})_b$$
 where $R^2 = -(CH_2)_3C_6H_4OH$

((C₆H₅)CH₃SiO_{2/2})_b and

 $(C_6H_5SiO_{3/2})_c$,

carbinol-functional silicone resins comprising the units:

$$((R^1)(CH_3)_2SiO_{1/2})_a$$
 where $R^1 = -(CH_2)_3C_6H_4OH$ and

(C6H5SiO3/2)c,

carbinol-functional silicone resins comprising the units:

$$((R^1)(CH_3)_2SiO_{1/2})_a$$
 where $R^1 = -(CH_2)_3C_6H_4OH$ and

 $(CH_3SiO_3/2)_c$,

carbinol-functional silicone resins comprising the units:

$$((R^1)(CH_3)_2SiO_{1/2})_a$$
 where $R^1 = -(CH_2)_3OH$ and

(C₆H₅SiO_{3/2})_c,

carbinol-functional silicone resins comprising the units:

$$((R^1)(CH_3)_2SiO_{1/2})_a$$
 where $R^1 = -(CH_2)_3OH$

(CH₃SiO_{3/2})_c and

 $(C_6H_5SiO_{3/2})_c$

carbinol-functional silicone resins comprising the units:

 $((CH_3)_3SiO_{1/2})_a$

$$((R^2)CH_3SiO_{2/2})_b$$
 where $R^2 = -(CH_2)_3OH$

 $((C_6H_5)CH_3SiO_{2/2})_b$ and

 $(C_6H_5SiO_{3/2})_c$

carbinol-functional silicone resins comprising the units:

((CH₃)₃SiO_{1/2})_a

$$((R^1)(CH_3)_2SiO_{1/2})_a$$
 where $R^1 = -(CH_2)_3OH$ and

 $(C_6H_5SiO_{3/2})_c$,

carbinol-functional silicone resins comprising the units:

$$((R^1)(CH_3)_2SiO_{1/2})_a$$
 where $R^1 = -CH_2CH(CH_3)CH_2OH$

((H)(CH₃)₂SiO_{1/2})_a and

 $(C_6H_5SiO_3/2)_c$,

carbinol-functional silicone resins comprising the units:

 $((R^1)(CH_3)_2SiO_{1/2})_a$ where $R^1 = -(CH_2)_3OH$

(CH₃SiO_{3/2})_c

wherein a has a typical value of 0.1 to 0.6, b has a typical value of zero to 0.4, and c has a typical value of 0.3 to 0.8.

- 14. The emulsion composition according to any of Claims 10 to 13, wherein greater than 10 weight percent of the $R^{1}+R^{2}+R^{3}$ groups are phenyl.
- 15. The emulsion composition according to any of Claims 10 to 14 wherein the emulsion composition further comprises at least one ingredient selected from fragrances, preservatives, vitamins, ceramides, amino-acid derivatives, liposomes, polyols, botanicals, conditioning agents, glycols, vitamin A, vitamin C, vitamin E, Pro-Vitamin B5, sunscreen agents, humectants, preservatives, emollients, occlusive agents, esters, pigments, and self-tanning agents.